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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,471	12/29/2004	Helmut Mertens	47724	2683

1609 7590 07/05/2007
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EXAMINER

ARDIENTE, DELILAH P

ART UNIT	PAPER NUMBER
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1723

MAIL DATE	DELIVERY MODE
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07/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,471

Applicant(s)

MERTENS ET AL.

Examiner

Delilah P. Ardiente

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/5/05.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/29/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims or the feature(s) canceled from the claim(s). The "*second and third filter units*" of e.g. Claim 5, are not properly shown. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 10 is objected to because of the following informalities: "to" is missing in line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 7-8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following phrases render the claims indefinite. See MPEP § 2173.05(d).
The use of the word "the respective" in Claims 1, 2, 8 and 10 is indefinite because it is unclear what part are being compared, i.e. respective to what? Did the applicant intend to claim "the respective" as referring to channels with support elements?

Claim 3 is also rejected since it suffers the same defect as the claims from which they depend.

There are insufficient antecedent basis for the limitations in the following claims.

Claims 3 and 4 recites the limitation "the support tube" in line 2 respectively.

Claim 4 recites the limitation "the base" in line 5.

Claim 7 recites the limitation "the two sides" in line 4.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4 and 6-7, 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Branchcomb, US 5104534 (hereafter, Branchcomb).

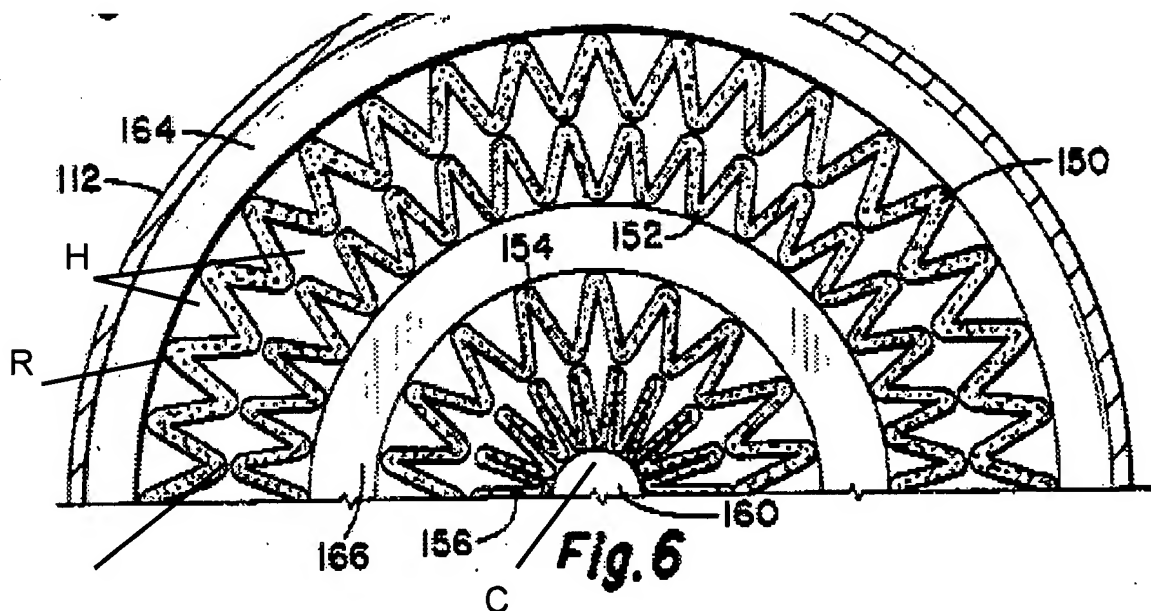


Fig. 6. Modified references: C, H and R.

Claim 1. Branchcomb teaches a filter element for filtering fluids having filter unit (150 and 154), being arranged concentrically around its longitudinal axis (Fig. 1 and col. 3 lines 1-4), and having support element (152 and 156) supported in the direction of the throughflow with the fluid stream on the support element (152 and 156).

The support elements (152 and 156) are being provided on their side facing the filter unit (150 and 154) having channels (modified, Fig. 6, H) for fluid guidance.

The channels (modified Fig. 6, H) extending with their longitudinal ribs (modified Fig. 6, R) bordering by the spiral tracks (gaps of helical pleats, Fig. 1, 30 or Fig. 6, 130 and 131) along the support element (modified Fig. 6, s1 and s2),

and the channels (modified Fig. 6, H) having two free ends (along sides on Fig. 6, 114 and 116) emerging on the opposing ends of the support element (152 and 156) extending continuously without repeated deflections of the fluid stream (arrows, Figs. 1 and 5) along the support elements (152 and 156) and only partially encompass the support element (gaps of helical pleats, Fig. 6, 130, 131) with the formation of twisting guides for the fluid flow (arrows, Figs. 1 and 5).

Claim 2. Branchcomb teaches the support elements (152 and 156) being formed from a support tube (modified Fig. 6, s1 and s2 and core tube, Fig. 3, and col. 3 lines 66-67), and wherein the channels (modified Fig. 6, H) bordering laterally by the projecting longitudinal ribs (modified Fig. 6, R) of the support tube.

Clam 3. Branchcomb teaches the channels (modified Fig. 6, H) being located both on the inner and outer peripheral side on the support tube (modified Fig. 6, s1 and s2).

Claim 4. Branchcombe teaches the longitudinal ribs (50), which are located directly adjacent connected in pairs to one another on the outer peripheral side form a support surface (s1 and s2) and on the inner peripheral side form the base of the groove of the individual channels (helical gaps and peaks of pleats, 130 and 131).

Claim 6. Branchcomb teaches the innermost support element (154) having a support tube (core tube, Fig. 3, col. 2 lines 41-44) with passages as the channel guide for the fluid flow (col. 2 lines 41-44).

Clam 7. Brancomb teaches the fluid stream may flow through the innermost and the outermost filter unit (modified Fig. 6, 164 to H), from the outside (150) to the inside in the direction to the clean side of the filter element (156 and Col. 1 lines 44-49), and wherein flow is incident on the filter unit (10a, 10b and 10c), lying in between and from the two sides, to the inside and outside (modified Fig. 6, 10a to 160 or 114 to 116).

Claim 9. Branchcomb teaches the support elements (152 and 156) and the filter units (150 and 154) being arranged concentrically to the longitudinal axis (Fig. 1 and col. 3 lines 1-4) of the filter element (150 and 154).

Claim 10. Branchcomb teaches 20 channels (modified Fig. 6, H) being located on one of the support elements (150) forming a common fluid guide, having a tilt of the twisting guide between 10° to 30°, preferably 15° (approximate visual angle on Fig. 1, 30 or helical pleats), relative to the axis which is parallel to the longitudinal axis of the filter element (150, 152, 154, 156 and Fig. 1 and col. 3 lines 1-4).

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 102(b) as anticipated by Branchcomb, US 5104534 (hereafter, Branchcomb) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Branchcomb, US 5104534 (hereafter, Branchcomb).

Claim 8. Branchcomb teaches the filter units (150, 152, 154, 156) to be cylindrical filter paper (col. 1 lines 34-38) that are pleated, having essentially the same linear dimension in the axial direction to the longitudinal axis as shown (Fig. 1, 26 and 28 and col. 3 lines 1-4).

The limitation of the filter unit being formed from a cylindrical filter mat is a product by process limitation. The pleated paper filter material of Branchcomb is considered to be substantially the same as that resulting from the product by process limitation. However, if there are any structural differences, the difference would have been minor and obvious. See *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Branchcomb, US 5104534 (hereafter, Branchcomb) in view of R.W. Green, US 2865510 (hereafter, Green).

Claim 5. Branchcomb teaches support elements (152 and 156) and filter units (152 and 156), but not three support elements and three filter units, which are arranged in an alternating sequence concentrically around the longitudinal axis (Fig. 1, col. 3 lines 1-4) of the filter element (150, 152, 154, 156). Green teaches three support elements (A, B and C) and three filter units (18) in each support elements (col. 3 lines 3535-45).

It would have been obvious to one of ordinary skill in the art at the time of the invention that having additional concentric filter elements would provide the benefit of increased filter area within the apparatus for increased volumetric flow filtration capacity (col. 1 lines 59-63).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delilah P. Ardiente whose telephone number is (571) 272-6375. The examiner can normally be reached on 7:00 AM - 3:00PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Roy Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Delilah P Ardiente
Examiner
Art Unit 1723


TERRY K. CECIL
PRIMARY EXAMINER

Dpa
Dpa
6/29/2007